

CSIRO Submission 12/467

CSIRO Submission on the Water Amendment (Long-term Average Sustainable Diversion Limit Adjustment) Bill 2012

Senate Standing Committee on Environment and Communications

October 2012

CSIRO has provided independent scientific advice to governments relating to the development of the Sustainable Diversion Limits (SDLs) in the proposed Basin Plan. This has included:

- a. submissions to the Murray-Darling Basin Authority (MDBA) on the proposed Basin Plan,
- b. leading a scientific review for the MDBA of the “Estimation of an Environmentally Sustainable Level of Take (ESLT) for the Murray-Darling Basin”,
- c. contributions to an expert panel and peer reviews for the South Australian Government related to the environmental consequences of proposed SDLs through the Goyder Institute of Water Research,
- d. a submission to the Murray-Darling Basin Ministerial Council (MDBMC) on the Section 43 (Water Act 2007) Notice, and
- e. contributions to expert advice to MDBMC on the development of an SDL Adjustment Mechanism now included in the altered proposed Basin Plan.

23A(3) Proposing adjustments of long-term average sustainable diversion limits

The Water Amendment (SDL Adjustment) Bill 2012 would provide the Minister with the power to amend SDLs in the Basin Plan without recourse to a parliamentary process, thus removing the need for inclusion of a completely specified adjustment mechanism in the Basin Plan.

The science review undertaken for the MDBA found that an adaptive approach to implementation of the Basin Plan is appropriate given the considerable uncertainty related to environmental outcomes stemming from incomplete knowledge of river and floodplain ecosystem processes. Given this incomplete knowledge, locking in an SDL adjustment mechanism within the Basin Plan precludes incorporating new scientific understanding. Such new understanding can reasonably be expected to demonstrate more water-efficient ways of achieving given Environmental outcomes, and also improve the methods by which environmental outcomes are predicted (based on flow regime change and other drivers).

On balance therefore, CSIRO’s view is that it is preferable to provide some discretion under the Water Act to adjust SDLs rather than lock in an adjustment method within the Basin Plan.

23A(4) Limit on proposed adjustments

The Water Amendment (SDL Adjustment) Bill 2012 specifies a 5% limit on the total Basin adjustment for any single Basin Plan amendment. For the currently proposed Basin Plan this represents ~710 GL/yr across the surface water SDL (10,873 GL/yr) and the groundwater SDL (3,324 GL/yr). Relative to the proposed reduction from the baseline surface water diversion limit (2,750 GL/yr) this represents a 26% change (increase or decrease). Relative to the residual surface water recovery volume (1,203 GL/yr at 30 June 2012) this represents a 59% change.

As this Amendment Bill does not separate adjustment limits for surface water and groundwater, the full allowable adjustment volume could be applied solely to either category. Given that an ESLT is a trade-off between environmental and socio-economic considerations, the requirement to ensure any adjusted SDL still represents an ESLT does not provide a sufficient “safety-net”. It appears that the criteria that the Basin Plan would need to specify under **23A 2(a)** are intended to provide a safety-net. However, given the different approaches for determining an ESLT for surface water and groundwater, different criteria would most likely be needed under **23A 2(a)** for surface and groundwater. CSIRO suggests that it would be appropriate to specify percentage limits for SDL adjustments surface water and groundwater separately.

CSIRO notes that given the progress on recovery of water for environmental purposes, there is a significant likelihood that a future SDL adjustment under the proposed mechanism may lead to the government having recovered more water than required. While there would be no legal or policy requirement for the government to then sell “surplus” entitlements, based on our analysis it seems likely that there would be pressure to do so.

23B Adopting proposed adjustments as amendments of Basin Plan

Although a limit on the total Basin adjustment is specified in the Amendment Bill at **23A(4)**, no limit has been placed on the size of adjustment for a water resource plan area (WRP) at **23B**. Once again, it appears that the criteria that the Basin Plan would need to specified under **23A 2(a)** are intended to provide a safety-net.

Placing limits on percentage adjustment at a WRP area level would overly constrain choices in securing the SDL resource unit shared reduction amounts for the northern Basin zone and the southern Basin zone. However, CSIRO suggests that placing a limit on the local reduction amount for a WRA area would be appropriate.

Given different levels of current knowledge for different parts of the Basin, there may be a basis for placing different percentage limits in different WRP areas; however, so as not to compromise the improved water security that the Water Act seeks to provide, CSIRO suggest, based on expert opinion, that the maximum limit for any single SDL adjustment for a WRP area is probably the order of 10% or less of the reduction volume in the original Basin Plan.

The Amendment Bill does not define the nature of the criteria that the MDBA should specify in order to determine whether an adjustment should be proposed. CSIRO suggests that in line with an adaptive approach, it would be helpful for the Amendment to require the Authority to indicate whether an improvement in knowledge about an ESLT suggests the need for an adjustment.